

# EV Spot Network & Evie Carshare



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# Vision and Need

## **Long term vision**

- 90% of Saint Paul residents live within a 5-minute walk of four affordable no/low carbon mobility options.
- Emphasizing carbon reduction & improved transportation options and access for BIPOC and low-wealth communities.

## **The need**

- No one-way carsharing results in people buying more cars.
- Lack of options falls hardest on under-resourced residents.
- Climate Action Plan targets 2.5% VMT reduction per year.
- Increase our attractiveness to employers and employees.



# Response

## ***Deploy***

Community-based, one-way,  
electric carshare and

curbside EV chargers to support  
carshare and public charging –

all renewably powered.



**evie**  
Operated by HOURCAR



**ev  
spot**  
charging



# Community-based, one-way, electric carshare

- 70 renewably powered EV Spots between the two cities
- 101 Chevy Bolts comprise current Evie Carshare Fleet, with 70 Nissan Leaf Plusses to be added later in 2022.
- Carshare fleet leased by City of Saint Paul and operated by HOURCAR.

## **The EV Spot Network will:**

- Reduce need to spend money on personal ownership of vehicles
- Improve mobility and access
- Reduce Vehicle Miles Traveled
- Reduce air pollution
- Accelerate EV adoption

# Who benefits?

- Employers and employees
- Transit users  
(including suburban commuters)
- Low-income households, especially  
single-earner families and seniors
- The region





# Multi-layered site selection process

## 1 Neighborhood Selection

Considerations taken when selecting neighborhoods for the charging hub locations include:



Transit usage



Resident demographics



Density of renters & public housing



Density of one- and zero-vehicle households



Density of existing & planned bicycle facilities



Roughly a 10-min walk between hubs within the service area

## 2 Siting Requirements

Is there 80-100' of uninterrupted curb that meets these requirements?

- 5' from driveways and alleys
- 30' from stop signs
- 10' from any fire hydrant
- Wide boulevard and sidewalk
- Ideally located on a two-lane road



Is there bike parking nearby or room to install some?

Does the site allow for ADA considerations?

Are there any bicycle facilities nearby? Does it conflict with an existing or planned bicycle facility?

Is there a transit stop nearby?

## 3 Agency Coordination

Review by divisions and agencies to avoid conflicts:

Forestry



Traffic Operations



Water Department



Sewer Division



Metro Transit



Xcel Energy



## 4 Additional Considerations

While charging hub locations are nearly finalized, input from adjacent property owners and tenants is being gathered regarding a narrow scope of issues, such as:



Is there an unmarked loading zone for a business where there is no feasible alternative location for loading?



Is there an unmarked bus layover area where there is no feasible alternative for laying over?



Are there any other important local curbside activities that a charging hub could negatively impact?



## EV Spot Charging

- 2 Dual-Port Level 2 Chargers, with 2 spaces reserved for Evie and 2 for public charging
- Chargers provided by MN company ZEF Energy
- Fueled by 100% Renewable Electricity (WindSource Purchase)
- 12 locations near freeways and destinations will also have a DC Fast Charger:

St Joseph's Lane & 7 <sup>th</sup> St	Park & 25 <sup>th</sup>
Bates & E 7 <sup>th</sup> St	14 <sup>th</sup> & Nicollet
Cesar Chavez & Parque Castillo	28 <sup>th</sup> & Hennepin
Carleton & University	Aldrich & Broadway
Aurora & Rice	Oak & Essex
Jackson & 14 <sup>th</sup>	4 <sup>th</sup> St N & 6 <sup>th</sup> Ave N





A map of the Minneapolis-St. Paul metropolitan area showing the distribution of 100 blue dots representing the population. The dots are concentrated in the Minneapolis and St. Paul urban centers, with a smaller cluster in Falcon Heights. The map includes labels for major roads like I-94, I-494, and I-35, and parks like Como Park and Indian Mounds Park.

*Map subject to change, still being finalized.*





# EV Spot Charging details

- Chargers at EV Spot locations are owned, maintained and operated by the respective city the chargers are located in.
- Pay at the blue public EV Spot chargers with a credit card or via the ZEFNET Charge app.
- Pricing:

	Level 2		DCFC	
Components -- SALES TAX INCLUDED	Price to consumer	Revenue to City per transaction	Price to consumer	Revenue to City per transaction
Per kWh rate – Daytime	\$0.25	\$0.23	\$0.35	\$0.32
Per kWh rate – Overnight	\$0.23	\$0.21	\$0.33	\$0.30
Per session connection fee	\$1.25	\$1.16	\$2.50	\$2.00
Dwell time penalty	\$10/hour (maximum \$50 fee per session)	\$9.27	\$0.25/minute (\$15/hour; maximum \$50 fee per session)	\$0.23

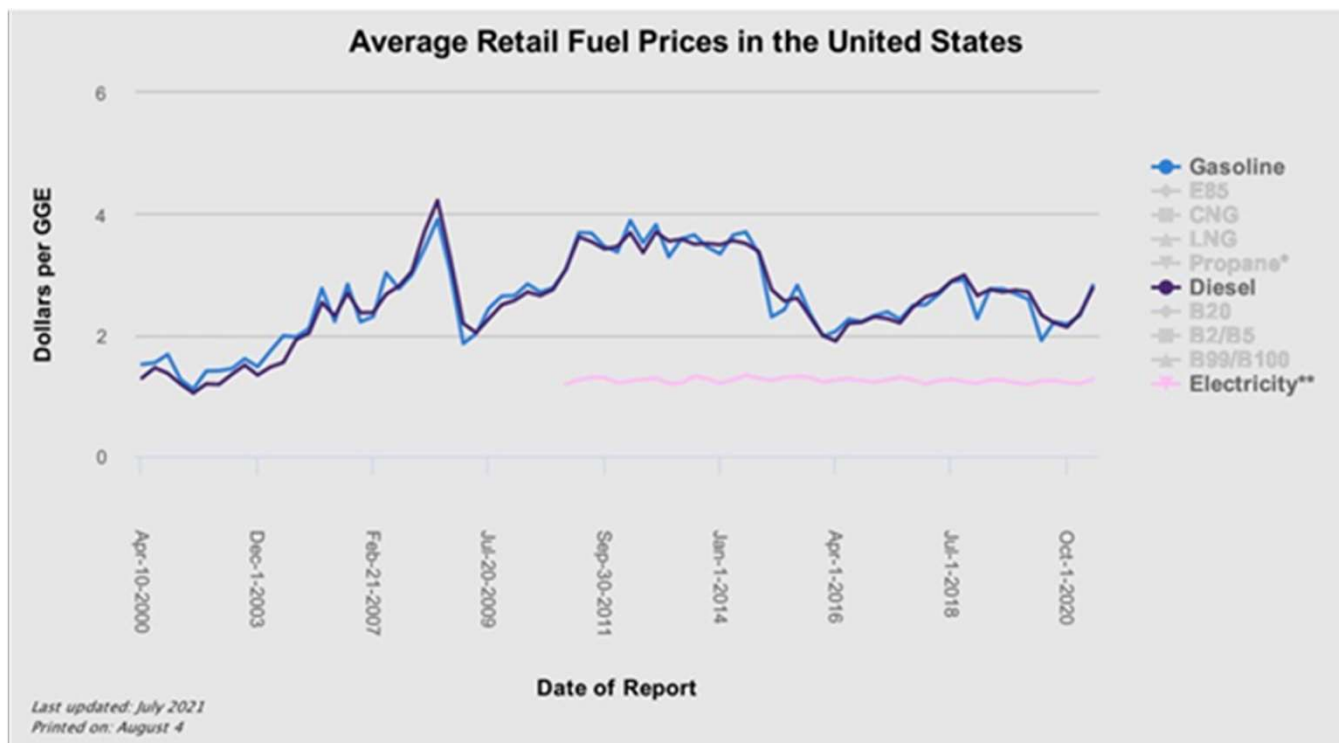


# Cost of fuel & personal vehicles rising

## Amid U.S. inflation surge, which prices are rising the most? Fuels, used cars and lodging lead the way

*Biggest % increases in consumer prices, December 2020-December 2021*

<b>50.8%</b>	Gasoline, unleaded regular
<b>44.5</b>	Gasoline, unleaded midgrade
<b>41.9</b>	Gasoline, unleaded premium
<b>41.0</b>	Fuel oil
<b>37.3</b>	Used cars and trucks
<b>36.0</b>	Car and truck rentals
<b>33.8</b>	Propane, kerosene and firewood
<b>27.6</b>	Other lodging away from home, including hotels and motels
<b>24.1</b>	Utility (piped) gas service
<b>22.1</b>	Uncooked beef roasts
<b>21.4</b>	Uncooked beef steaks
<b>18.6</b>	Bacon and related products
<b>17.3</b>	Living room, kitchen and dining room furniture
<b>13.0</b>	Uncooked ground beef
<b>12.9</b>	Window coverings



Note: Certain nonspecific "catchall" categories not shown.

Source: U.S. Bureau of Labor Statistics

PEW RESEARCH CENTER

# Goals: Sustainable, equitable mobility and health

Low-wealth people and communities of color

- Drive less
- But get more air pollution

Carsharing reduces vehicle ownership and VMT

- Each one-way carshare vehicle replaces 7-13 private vehicles.
- Carshare households: VMT falls by 27% to 43%.
- As VMT falls, so do other harms



# Work with the community to learn

## Prototyping learnings



**FLEXIBILITY, FREEDOM, AND INDEPENDENCE** are valued most, and values that residents felt the EV car-share service could deliver for them



**TIME, EFFORT, AND RELIABILITY** were the most important factors in choosing EV car-share vs. other transportation options



# Shared mobility, equitably implemented

## Core Partners Council

- Community-Based Organizations
- Made recommendations about carshare rate structure and barriers to access.





Current and ongoing  
work: community-  
informed  
recommendations  
in action

Recommended Actions	Has been addressed	In Progress	Future Improvement
Increase affordability	X	X	X
Build Awareness		X	X
Make it easier	X	X	X
Translate into multiple languages		X	X
Incorporate ride share			X



# Public-private partnership to fund and build

- Investment
  - Regional CMAQ                      \$4 million
  - US DOE                                \$3.65 million
  - Saint Paul                            \$750,000
  - Minneapolis                        \$350,000
  - Xcel                                    \$4 million
- Each City will own, operate, and maintain its own EV Spots, with coordination and alignment on parking and pricing.

# Partners



# Thanks!

[www.evspot.org](http://www.evspot.org)

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